Letter by Salzberg and Emmert Regarding Article, “Left Atrial Appendage Occlusion Debate Revisited”

To the Editor:

We read with great interest the report by Whitlock et al, who have highlighted the fact that the left atrial appendage (LAA) occlusion is an effective concept for stroke-prevention in patients with atrial fibrillation.¹

The data presented in this report demonstrate improving safety and efficacy data on LAA occlusion with a noninferiority and even superiority to warfarin treatment which has led to a fast and wide implementation of this therapy strategy in our daily clinical routine. Importantly, the authors also point out the well-known problem of potential leaks or rest-perfusion associated with the currently available interventional LAA occlusion devices such as the WATCHMAN (that was used in the Watchman Left Atrial Appendage System for Embolic Protection in Patients With Atrial Fibrillation [PROTECT-AF] and Prospective Randomized Evaluation of the WATCHMAN LAA Closure Device in Patients With Atrial Fibrillation Versus Long Term Warfarin Therapy [PREVAIL] trials; NCT00129545 and NCT01182441) due to the fact of the high variability of the LAA with regards to size, shape, and anatomy.¹ The consideration of epicardial LAA closure devices may represent an effective alternative for selected patients. However, Whitlock et al only mention 1 ongoing multicenter trial, the Left Atrial Appendage Occlusion Study (LAATOS III), although the current state and experience with these epicardial devices is already extensive.¹ The AtriClip (AtriCure) which is currently being used in the LAATOS III trial is available since 2007 and, besides the fact that over 40,000 devices have been implanted so far, data from a first-in-man study suggest an excellent safety, efficacy, and durability profile.²³ While re- or rest-perfusion is an established problem with interventional devices such as the WATCHMAN,¹ in this pilot trial, serial computed-tomography showed 100% durable occlusion of the LAA in all patients at 3-year follow-up.¹ Next, a second epicardial device, the Tiger-Paw (MAQUET), was recently approved by the US Food and Drug Administration and introduced into the market. Similar to the AtriClip, this device displays comparable short-term safety and efficacy results and appears to be even simpler to use.⁴ Importantly, for both aforementioned epicardial tools, second-generation devices for minimally-invasive thoracoscopic approaches are underway. In a recent paper, Ohtsuka et al¹ have demonstrated the safety and efficacy of stand-alone thoracoscopic LAA amputation with a linear stapler which has long been an important aspect of minimally-invasive surgical atrial fibrillation concepts.

Patients referred for LAA closure often have a strong contraindication to oral anticoagulation, and in this setting achieving 100% closure to remove the necessity for oral anticoagulation is very important. To achieve this, it is crucial that important anatomic and morphological considerations are integrated into the treatment stratification to ensure a good outcome. It appears that device-enabled catheter-closure is far from offering perfect results. Two big problems remain. First, patients are highly selected when being chosen for device enabled LAA closure. This leads to a large proportion of patients requiring closure not being adequately treated. Second, even when this is performed, no device achieves perfect closure. Therefore it is important to think outside the box and refer these patients for minimally-invasive surgical LAA closure. Only a more outcome-oriented collaboration between cardiologists and surgeons as a heart-team focusing on technique, device, and patient selection will ensure a safe, complete, and durable LAA closure in all patients.

Disclosures

None.

Sacha P. Salzberg, MD
Heart Clinic
Hirslanden Hospital
Zurich, Switzerland

Maximilian Y. Emmert, MD, PhD
Clinic for Cardiovascular Surgery
University Hospital
Zurich, Switzerland

References


Letter by Salzberg and Emmert Regarding Article, "Left Atrial Appendage Occlusion Debate Revisited"
Sacha P. Salzberg and Maximilian Y. Emmert

_Circulation_. 2015;132:e229
doi: 10.1161/CIRCULATIONAHA.115.016476
_Circulation_ is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2015 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/132/19/e229

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in _Circulation_ can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to _Circulation_ is online at:
http://circ.ahajournals.org//subscriptions/